REMARKS

I. Initial Remarks

Claims 1-3, 7-9, and 15-17 are amended, and claims 22 and 23 are added. Support for the amendments and new claims may be found in the Specification at least in paragraphs [0021] and [0036], and no new matter has been added. No claims are cancelled in this paper. Further, Applicants note that the election/restriction requirement dated 5-13-2008 has been withdrawn. Thus, claims 1-23 are pending in this application. Claims 1, 7, 8, 15, 16, and 17 are in independent form.

In the Office Action, claims 1-21 were rejected under 35 U.S.C. § 102(e) as allegedly anticipated by U.S. Patent No. 7,103,542 to Doyle ("Doyle"). The Office Action presents new grounds of rejection.

In view of the following arguments, all claims are believed to be in condition for allowance over the references of record. Therefore, this response is believed to be a complete response to the Office Action.[1] Further, for any instances in which the Examiner took Official Notice in the Office Action, Applicants expressly do not acquiesce to the taking of Official Notice, and respectfully request that the Examiner provide an affidavit to support the Official Notice taken in the next Office Action, as required by 37 CFR 1.104(d)(2) and MPEP § 2144.03.

[1] As Applicants' remarks with respect to the Examiner's rejections are sufficient to overcome these rejections, Applicants' silence as to assertions by the Examiner in the Office Action or certain requirements that may be applicable to such rejections (e.g., whether a reference constitutes prior art, motivation to combine references, assertions as to dependent claims, etc.) is not a concession by Applicants that such assertions are accurate or such requirements have been met, and Applicants reserve the right to analyze and dispute such assertions/requirements in the future.

II. Section 102 Rejections

A. Independent Claim 1

As amended, claim 1 recites in part "identifying potential problem areas with at least one speech application script, using the retrieved event data." The Examiner cited "step 540 in figure 5 or referring to col. 12, lines 25-38" as allegedly disclosing the recitations prior to amendment. However, at most Doyle discloses "improving the recognition quality of a voice recognition system by automatically detecting recognition errors" (Doyle, col. 6, lines 8-9; emphasis added) which in fact teaches away from "identifying potential problem areas with at least one speech application script" as recited by Applicants' claim 1. (Emphasis added.)

Doyle discloses

> Systems and methods for automatically improving a voice recognition system are provided. In one embodiment, the systems and methods retrieve voice recognition information produced by a voice recognition system in response to recognizing a user utterance. The voice recognition information comprises a recognized voice command associated with the user utterance and a reference to an audio file that includes the user utterance. The audio file is played and it is determined if the recognized voice command matches the user utterance included in the audio file. The user utterance is then transcribed to create a transcribed utterance, if the recognized voice command does not match the user utterance. The transcribed utterance is then recorded in association with the recognized voice command to monitor recognition accuracy.

(Doyle, Abstract.) In Doyle, "[a] recognition error is detected if the recognized voice command does not match a corresponding transcribed utterance," and "each detected recognition error is recorded in an error log along with an error type" (Doyle, col. 2, lines 30-34.) Doyle discloses that "[errors] can be classified as one of the following types: in-grammar false reject (IGFR), in-grammar false accept (IGFA), out-of-grammar false accept (OGFA)," and an "out-of-grammar correct reject (OGCR)" may be recorded "if the transcribed utterance is frequently recorded in the transcription log." (Doyle, col. 2, lines 34-51.) Doyle "analyzes the error types recorded in the

error log to hypothesize at least one solution to eliminate the sources of error." (Doyle, col. 2, lines 56-57.)

Example "solutions" include where "the acoustically similar word or phrase may be deleted from the grammar" (Doyle, col. 3, lines 7-8), "[adding] to the grammar additional phonetic definitions, or further [training] the associated acoustic models" (Doyle, col. 3, lines 39-40), "[lowering] the voice recognition system's confidence threshold level" (Doyle, col. 3, lines 58-59), "[raising] the confidence threshold level" (Doyle, col. 4, lines 3-4), raising or lowering a "sensitivity threshold" (Doyle, col. 4, lines 16-29), raising or lowering a "timeout threshold" which is "the minimum time duration of an utterance that is required for acceptance of that utterance" (Doyle, col. 4, lines 30-47), and so on.

Additionally, "[based] on at least one hypothesized solution . . . the system modifies the initial configuration of the voice recognition system to implement a new configuration." (Doyle, col. 5, lines 27-30.) "The system then tests the voice recognition system to detect improvements in voice recognition accuracy." (Doyle, col. 5, lines 30-33.) At most, Doyle discloses "automatically detecting recognition errors and modifying the system to prevent such errors from occurring again" (Doyle, col. 6, lines 9-11; emphasis added.), not "problem areas with at least one speech application script." (Emphasis added.) In sum, nowhere does Doyle in any way teach or suggest "identifying potential problem areas with at least one speech application script, using the retrieved event data." For at least these reasons, Doyle fails to teach or suggest the recitation of claim 1.

Doyle further fails to teach or suggest "presenting the response to aid in improving the performance of the at least one speech application script," within the context of "formulating a response to the request using the identified potential problem areas," as recited by Applicants' claim 1. (Emphasis added.) The Examiner cited "step 550 in figure 5 or referring to col. 12, lines 39-50; find a 'solution' for the identified problem areas" and "steps 560 and 590-597 in figure 5, reconfiguring the system to improve the speech application" of Doyle as allegedly disclosing the recitations. Step 550 of Doyle's Fig. 5 states to "Hypothesize solution for errors," while step 560

states to "Reconfigure system based on the solution." Additionally, "[at] step 590, if the system determines that the modified configuration has improved recognition accuracy and efficiency, then the system at step 592 accepts the modified configuration. Otherwise the system at step 597 reverts to the previous configuration." (Doyle, col. 12, lines 59-64.) Thus, as Doyle automatically "accepts the modified configuration," Doyle accordingly fails to teach or suggest, and in fact teaches away from, "presenting the response to aid in improving the performance of the at least one speech application script" as recited by claim 1. (Emphasis added.)

With regard to Doyle's modified configuration, Doyle further states that

> Another noise-related source of error involves the timeout threshold. A timeout threshold, in one embodiment, is the minimum time duration of an utterance that is required for acceptance of that utterance by the system. Alternatively, a timeout threshold may define how much time a user has following a system prompt to begin a response. For example, if the timeout threshold is too short, then a user has very little time to begin speaking, thus contributing to user frustration. If the system detects this type of error, it may increase the timeout threshold.

(Doyle, col. 4, lines 30-39.) Thus, Doyle teaches to address timeouts by "[increasing] the timeout threshold." However, where a timeout is caused by "potential problem areas with at least one speech application script," now only does Doyle fail to "[identify the] potential problem areas with at least one speech application script, using the retrieved event data," but instead Doyle teaches to modify the configuration of the voice recognizer, in effect to mask "potential problem areas," not to present them. Accordingly, Doyle additionally teaches away from "presenting the response to aid in improving the performance of the at least one speech application script," within the context of "identifying potential problem areas with at least one speech application script" and "formulating a response to the request using the identified potential problem areas" as recited by claim 1. (Emphasis added.) For at least these additional reasons Doyle fails to teach or suggest the recitation of claim 1.

For at least these reasons, Doyle fails to teach or suggest the recitation of claim 1. Thus, the Examiner's rejection of claim 1, as well as all claims depending therefrom, should be withdrawn and the claims allowed.

B. Independent Claim 7

Applicants submit that independent claim 7 is patentable over Doyle at least for reasons similar to those set forth above regarding independent claim 1. Independent claim 1 recites "identifying potential problem areas with at least one speech application script, using the retrieved event data." Independent claim 7 contains the similar recitation "means for periodically analyzing the event data to identify potential problem areas with at least one speech application script." Although claim 7 is a means plus function claim and recites different details than claim 1, claim 7 is patentable over Doyle for at least reasons similar to those set forth above regarding independent claim 1. Additionally, claim 1 recites "presenting the response to aid in improving the performance of the at least one speech application script" and claim 7 recites "means for providing results of the periodic analyzing to aid in improving the performance of the at least one speech application script." Although claim 1 recites "presenting the response" and claim 7 recites "means for providing results," Doyle still lacks the required teachings.

Additionally, claim 7 further recites "means for obtaining event data associated with a plurality of user interactions with at least one speech application script played by a plurality of distributed speech application systems." The Examiner cited "figure 4; call log 136 containing error log 440 and transcription log 430 collected during user interactions with the system" of Doyle as allegedly disclosing these claim elements prior to amendment. However, Applicants respectfully disagree that Doyle teaches or suggests at least these additional claim elements of claim 7. Doyle fails to teach or suggest "a plurality of distributed speech application systems," as recited by claim 7. (Emphasis added). In contrast, the system as disclosed by Doyle includes a sole "voice recognition gateway 100." and nowhere does the reference in way indicate there may be a plurality of voice recognition gateways 100. (E.g., Doyle, figure 1). Moreover, even assuming that Doyle

does disclose a plurality of voice recognition gateways 100, which it does not, nowhere does Doyle teach or suggest any "means for obtaining event data associated with a plurality of user interactions with at least one speech application script played by a plurality of distributed speech application systems." (Emphasis added.) The sections of Doyle cited by the Examiner for these claim elements confirm this deficiency, merely disclosing "using transcription software 420 to generate an error log 440 from call log 136," without any indication of "a plurality of distributed speech application systems." (Doyle, col. 10, lines 2-3.)

Thus, Doyle does not teach each and every element of independent claim 7. Accordingly, for at least the foregoing reasons, claim 7 is patentable over Doyle and is in condition for allowance.

C. Independent claims 8, 15, 16, and 17

Independent claims 8, 15, 16, and 17 are also patentable over Doyle for reasons similar to those set forth above regarding claims 1 and 7.

For example, independent claim 8 recites to "identify potential problem areas with at least one speech application script, using the retrieved event data," and independent claim 1 recites, "identifying potential problem areas with at least one speech application script, using the retrieved event data." Although claim 8 recites a voice stream analyzer and mentions distributed speech applications, and independent claim 1 recites a method, as discussed above with regard to claim 1 Doyle lacks the required teachings. As another example, claim 1 recites "presenting the response to aid in improving the performance of the at least one speech application script," and claim 8 recites "provide the response to aid in improving performance of at least one speech application script." Although claim 1 recites "presenting the response" and claim 8 recites "provide the response," Doyle lacks the required teachings.

Similarly, independent claim 15 recites in part to "identify potential problem areas with at least one of speech application script played by the speech application systems, using the retrieved event data," and to "provide the response to aid in improving the performance of at least one speech

application script." Although claim 15 recites a network and claim 1 recites a method, for similar reasons as discussed above with regard to claim 1, Doyle fails to teach or suggest these recitations of claim 15 as well.

Moreover, as currently amended, independent claim 16 recites in part "periodically analyzing the event data to identify potential problem areas with at least one of the one or more speech application scripts." Similar to as discussed above with regard to independent claim 1, Doyle fails to teach or suggest "periodically analyzing the event data to identify potential problem areas with at least one speech application script," and "presenting the results to aid in improving the performance of the at least one speech application script" as recited by claim 16. Although claim 1 and claim 16 recite methods with different details, Doyle still lacks the required teachings.

Additionally, independent claim 17 recites in part "a plurality of distributed speech application systems," to "periodically analyze the event data in the database to identify potential problem areas with at least one speech application script associated with the user interactions," and to "provide results of the periodic analysis to aid in improving performance of the at least one speech application script." As discussed above with regard to claims 1 and 7, although claim 17 recites a voice stream analyzer and different details, Doyle lacks the required teachings.

Accordingly, for at least the foregoing reasons, claims 8, 15, 16, and 17 are patentable over Doyle and Applicants respectfully request that the Examiner withdraw the rejection of these claims, which also are in condition for allowance.

D. Dependent claims 2-6, 9-14, and 18-23

All dependent claims depend either directly or indirectly from one of independent claims 1 and 8. Therefore, claims 2-6, 9-14, and 18-23 are in condition for allowance at least because they are dependent from one of the independent claims 1 or 8. Nevertheless, these dependent claims also recite independently patentable subject matter.

1. Claims 3 and 9

For example, each of claims 3 and 9 recites in part "wherein the event data includes information regarding verbal and non-verbal exchanges that occurred during users' interactions with the at least one speech application script." The Examiner cited "figures 7A-B" of Doyle as allegedly disclosing these recitations, and stated that "event data are both verbal and non-verbal exchanges." (Office Action, page 8.) However, Doyle at most discloses only verbal exchanges, without any "non-verbal exchanges," and thus fails to teach or suggest "wherein the event data includes information regarding verbal and non-verbal exchanges that occurred during users' interactions." (Emphasis added.)

Figures 7A and 7B of Doyle "in combination, illustrate a flow diagram of a method of adjusting a voice recognition system." (Doyle, col. 5, lines 61-63.) In Doyle, "transcription log 430 includes information about each improperly recognized utterance and error log 440 includes the error types for each entry in transcription log 430. At step 540, application software 222 causes the system to analyze entries recorded in the system logs to determine the possible sources of error." (Doyle, col. 12, lines 25-30; emphasis added.) Indeed, "step 550 the system hypothesizes solutions that can resolve system inefficiencies and prevent certain errors from occurring. Exemplifying methods for hypothesizing solutions for various sources of error are illustrated in FIGS. 7A through 7B." (Doyle, col. 12, lines 40-44.) Moreover, steps 710, 715, 720, 725, 730, 747, 750, and 780 each recite one of "utterance," "utterances," and "speech," while steps 740, 760, 770 recite "noise," "timeouts," or "delays" regarding the utterances and speech. (Doyle; Figs. 7A and 7B.) No steps recite a "non-verbal exchange." Accordingly, Doyle fails to teach or suggest "wherein the event data includes information regarding verbal and non-verbal exchanges that occurred during users' interactions with the at least one speech application script" as recited by claims 3 and 9. For at least these reasons, claims 3 and 9 are separately patentable.

2. Claims 22 and 23

Claims 22 and 23 each recite further details of speech application scripts not found in the references of record. Thus, Applicants respectfully submit that claims 22 and 23 are separately patentable.

CONCLUSION

In view of the above amendment, Applicants believe the pending application is in condition for allowance.

Applicants believe no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 18-0013, under Order No. 65632-0230 from which the undersigned is authorized to draw. To the extent necessary, a petition for extension of time under 37 C.F.R. § 1.136 is hereby made, the fee for which should be charged to this deposit account.

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